

USSR

REZNIKOV, R. A., Publishing House of Literature on Construction, 1971, 311 pp

FOOTNOTES: 1. Includes alphanumeric printer with speed of 300-400 lines/sec. 2. Provides for simultaneous running of several programs. 3. Includes permanent memory for storage of subroutines. 4. Includes magnetic card storage. 5. Includes cathode-ray tube display of alphanumeric output data. 6. Taken out of production. 7. Includes built-in system of automatic programming. 8. Input language close to ALGOL. 9. One of the input languages (ANALITIK) makes possible analytic transformations, including differentiation and integration, on the machine.

4/4

- 107 -

USSR

UDC: 539.374

MAKUSHOK, Ye. M., SEGAL, V. M., REZNIKOV, V. I., Physicotechnical Institute of the Academy of Sciences of the BSSR

"Computer Processing of Experimental Moiré Patterns"

Minsk, Doklady Akademii Nauk BSSR, Vol 16, No 6, Jun 72, pp 513-515

Abstract: A method is proposed for processing experimental patterns of the deformed state. The procedure embraces various uses of the moiré method and can be extensively used in experimental mechanics. The proposed method ensures optimum retention of the objectivity of the initial information after mathematical processing with regard to the physical conditions and peculiarities of the processes investigated. The accuracy of the computed values on all stages is commensurate with the accuracy of the initial quantities and basic premises of contemporary theory. The proposed method of approximation and smoothing is readily realized on computers and can be extended to cover other cases of the deformed state.

1/1

- 84 -

USSR

UDC 539.374

MAKUSHOK, YE.M., SEGAL, V.M. and REZNIKOV, V.I.

"Two-Way Estimate of Force Required for Drawing a Plate Through a Tapered Die"

Minsk, Vestsi Akedemii Navuk BSSR, Seryya Fizika-Tekhnichnykh Navuk, No 3, 1971, pp 17-24

Abstract: The two-dimensional analysis of stresses and velocities for a plate drawn through a tapered die is made. Polar coordinates are used.

Equations (11) giving the stress distribution and equation (12) giving the velocity distribution are derived. These equations contain several constants of integration.

The lower boundary of the solution is based on the sliding lines being the limit of plasticity. The corresponding force required for drawing the plate through the die is given by equation (18).

1/2

USSR

MAKUSHOK, YE. M., et al., Vestsi Akedemii Navuk BSSR, Seryya Fizika-Tekhnichnykh Navuk, No 3, 1971, pp 17-24

The upper boundary of the solution is based on the velocity distribution. The corresponding drawing force versus percentage reduction of plate thickness is given on fig. 2 for several angles of taper and for friction coefficients of 0 and 0.1.

The optimum angle of taper versus percentage reduction of plate thickness for several values of friction coefficient is given on fig. 3.

2/2

- 110 -

USSR

UDC: 621.438:621.45:

YAZIK, A. V., KRUCHAN, I. S., YASTREBOV, L. A., REZNIKOV, V. S.

"The GTU-2000 -- a Promising Mobile Gas Pumping Installation"

Tr. Ukr. NII prirod. gazov (Works of the Ukrainian Scientific Research Institute of Natural Gases), 1970, vyp. 4(8), pp 315-318 (from RZh-Turbo-stroyeniye, No 5, May 71, Abstract No 5.49.68)

Translation: The Ukrainian Scientific Research Institute in cooperation with the Leningrad Administration of Gas Mains has developed a pilot model of the GTU-2000 gas-pumping unit based on the AI-20 aircraft engine and the 102-11-1 forcing gas pump. The AI-20 engine is a single-shaft unit with a rating of 3675 hp at a turbocompressor speed of 12,300 rpm. The engine has an axial ten-stage compressor, $\pi_K = 7.5$. The turbine is a three-stage reaction unit. The gas temperature following the turbine is no more than 500°C. The modified engine weighs about one ton. The 102-11-1 is a centrifugal pump with a single stage, $\pi_K = 1.31$, power consumption is 1720 kW, gas flow under suction conditions is $Q = 75$ cu. m. per min, and forcing pressure is $p_H = 56$ kg/cm².

1/1

Powder Metallurgy

USSR

UDC 669.24

YELYUTIN, V. P., MOZSHUKHIN, YE. I., REZNIKOV, YU. A., and KUL'GA, G. YA.,
Moscow Institute of Steel and Alloys

"Properties of Nickel Powder Containing Inclusions of Calcium Oxide"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya,
No 11, 1971, pp 132-135

Abstract: A study was made of the effect of the recovery temperature of mixtures of NiO and CaO powders and the content of CaO additive in the mixture on the dimension of coherent dispersion domains and micro-distortion of Ni in powders, reduced in a hydrogen current. With rising recovery temperature, micro-distortions of the crystalline lattice of Ni decrease, but the dimension of coherent dispersion domains changes nonmonotonously. The rising recovery temperature goes with an increase of the mean size of Ni-powder particles. The effect of the recovery temperature and inclusions of calcium oxide on the compressibility of bricks by pressing and caking was investigated. The compression degree of bricks by caking decreases with increasing dimension of coherent dispersion domains of Ni. Four illustrations, four bibliographic references.

1/1

USSR

UDC 541.651+621.375.9

ARISTOV, A. V., VIKTOROVA, YE. N., MASLYUKOV, YU. S., REZNIKOVA, I. I., and
CHERKASOV, A. S.

"Effect of Structure and Degree of Purity of Rhodamines on Their Oscillation
Characteristics for Laser Pumping"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol 19, No 2, 1973, pp 250-253

Abstract: The authors find that there has been no investigation of the relative oscillation efficiency of the different rhodamines or of the effect of the degree of purity of the rhodamine on its oscillation efficiency. The present paper therefore presents the results obtained in oscillation tests, under identical conditions, of eleven rhodamines of different structures. Part of these specimens are commercial products, the remainder were specially synthesized by known methods. A listing of the nomenclature of the various specimens and a table of their relative oscillation characteristics are given. The latter shows that the rhodamine's oscillation ability is a function of the purity of the material. Also shown is a curve for the oscillation energy as a function of the optical density of the rhodamine solutions. The testing method is explained.

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--QUENCHING OF THE FLUORESCENCE OF NITROGEN CONTAINING HETEROCYCLIC
COMPOUNDS BY ANTHRACENE DERIVATIVES -U-
AUTHOR--(03)--UBYKNOVENNAYA, I.YE., REZNIKOVA, I.I., CHERKASOV, A.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 594-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--FLUORESCENCE, HETEROCYCLIC NITROGEN COMPOUND, ANTHRACENE,
NAPHTHALENE, QUINOLINE, LUMINESCENCE QUENCHING, EXCITED STATE, COMPLEX
COMPOUND, ELECTRON ACCEPTOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/2051

STEP NO--UR/0048/70/034/003/0594/0598

CIRC ACCESSION NO--AP0125639

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF ANTHRACENE (I), ITS 9-ME, 9-PR, 9,10-DI-ME, AND 9,10-DI-PR HOMOLOGS, 9-ACETYLANTHRACENE, 9-BROMANTHRACENE, 1,2-BENZANTHRACENE, ACRIDIEN (III), NAPHTHALENE (III), AND QUINOLINE (IV) ON THE FLUORESCENCE OF 9-AMINOACRIDINE, 3,6-BIS(DIMETHYLAMINO)ACRIDINE (IN THE PRESENCE OF 10 PRIME NEGATIVE 2 MOLE-L. HCL OR KOH), AND RIBOFLAVINE (V) IN ETOH WAS STUDIED, AND THE ABS. QUENCHING CONSTS. ARE TABULATED. NEITHER THE FLUORESCENCE NOR THE ABSORPTION SPECTRA OF THE LUMINOPHORS UNDER STUDY ALTERED ON THE ADDN. OF I DERIVS. MOST OF THE OTHER COMPS. SHOWED PRONOUNCED QUENCHING EFFECT. THE FLUORESCENCE YIELD B DECREASED AS A FUNCTION OF THE QUENCHING AGENT CONC. (A SUB2) IN ACCORDANCE WITH THE STERN FOLMER VAVILCV RELATION B SUBO-B EQUALS 1 PLUS K(A SUB2). THE SIMULTANEOUSLY OBSD. DECREASE IN THE DURATION OF FLUORESCENCE WITH INCREASING (A SUB2) SUGGESTED AN INTERACTION BETWEEN THE QUENCHING AGENT AND LUMINOPHOR MOLS. IN AN EXCITED RATHER THAN GROUND STATE. THE QUENCHING CONSTS. OF THE 9-PR AND 9,10-DI-PR HOMOLOGS OF I WERE ALWAYS LOWER AS COMPARED WITH THE RESP. ME COMPS. ALSO THE INTERMEDIATE COMPLEXES FORMED BY THE INTERACTION WERE PRESUMED TO POSSESS A SANDWICH STRUCTURE. THE TRICYCLIC MOLS. OF THE ANTHRACENES AND II THAT STERICALLY CORRESPONDED TO THE AMINOACRIDINES UNDER STUDY ALSO HAD CONSIDERABLY STRONGER QUENCHING EFFECT THAN THEIR BICYCLIC ANALOGS III AND IV. THE QUENCHING EFFECT WAS MORE PRONOUNCED IN THE ACIDIC FORMS THAN IN THE ALK. FORMS OF THE AMINOACRIDINES, AND THE STRONGEST QUENCHING BY THE ANTHRACENES WAS OBSD. IN V, WHICH POSSESSES A DISTINCT ELECTRON ACCEPTOR CHARACTER.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SYNTHESIS IN A SERIES OF PHTHALIMIDE DERIVATIVES. II. PREPARATION
OF 3,6-DISUBSTITUTED N-METHYLPHTHALIMIDES -U-
AUTHOR-(02)-VESELOVA, T.V.; REZNIKOVA, I.I.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 840-5
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHTHALIC ACID, IMIDE, ORGANIC SYNTHESIS, ELECTRON SPECTRUM,
LUMINESCENCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/2074 STEP NO--UR/0366/70/006/004/0840/0845
CIRC ACCESSION NO--AP0125661
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 020

CIRC ACCESSION NC--AP0125661
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A SERIES OF TITLE PHTHALIMIDES (I)
WAS PREPD. BY CONVENTIONAL TECHNIQUES. THE INTRODUCTION OF NAC GROUPS
INTO THE 3 AND (OR) 6 POSITION CAUSES A STRONG HYPSOCHROMIC SHIFT IN THE
ELECTRONIC SPECTRA OF I. THE INTRODUCTION OF BR OR IODINE INTO I
DEPRESSED THE LUMINESCENCE AT ROOM TEMP.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF WATER AND OXYGEN IN NONPOLAR SOLVENTS ON THE LUMINESCENCE
PROPERTIES OF PHTHALIMIDE DERIVATIVES -U-
AUTHOR--(04)-VESELOVA, T.V., REZNIKOVA, I.I., CHERKASOV, A.S., SHIROKOV,
V.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 649-53
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--PHTHALIC ACID, IMIDE, FLUORESCENCE SPECTRUM, AMINE, SOLVENT
ACTION, FLUORESCENCE QUENCHING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/0949

STEP NO--UR/0048/70/034/003/0649/0653

CIRC ACCESSION NO--AP0134669

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134669

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SIMILARLY TO PREVIOUS EXPTS. USING DEAERATED SOLNS. (V., R., C., AND S., 1968), ADDN. OF THE MAX. SOL. AMTS. OF WATER TO AIR CONTG. HEXANE AND PHME SOLNS. OF 4,AMINOPHTHALIMIDES RESULTED IN A SHIFT OF THE FLUORESCENCE SPECTRUM TOWARDS LONGER WAVELENGTHS AND AN INCREASED AMT. OF FLUOROMETRIC PHASE (CHARACTERIZING THE DURATION OF LUMINESCENCE) ACROSS THE SPECTRUM. THE SPECTRAL AND PHASE CHARACTERISTICS OF ANHYD., DEAERATED NEUTRAL SOLNS. OF 4,AMINO,N,METHYLPHTHALIMIDE (I), 4,AMINO,N,CYCLOHEXYLPHTHALIMIDE (II), 4,ANILINO,N,METHYLPHTHALIMIDE, 3,AMINO,N,METHYLPHTHALIMIDE, AND 3,(DIPHENYLAMINO),N,METHYLPHTHALIMIDE IN SEVERAL NON POLAR SOLVENTS ARE TABULATED. THE REMOVAL OF WATER AND O SUB2 FROM THE SOLNS. RESULTED IN A REVERSE SHIFT OF THE FLUORESCENCE SPCTRA TOWARDS SHORTER WAVELENGTHS; THUS, IN PHME AND ME SUB2 CO SOLNS. OF I, LTHE SHIFT WAS 700 AND 500 CM PRIME NEGATIVE1, RESP. THE BAS. QUANTUM YIELD AND FLUORESCENCE LIFETIME OF COMPLETELY ANHYD., DEAERATED SOLNS. FO I AND II WERE CONST. IN A GAMMA SUBMAX. RANGE OF 21,000-24,500 CM PRIME NEGATIVE1. THE QUENCHING EFFECT OF O SUB2 DROPPED IN THE ORDER HEXANE GREATER THAN DECALIN GREATER THAN TOLUENE GREATER THAN DIOXANE, AND WAS ALMOST ABSENT IN BUOH AND ETOH. WATER IN THE CONCNS. THAT ARE USUALLY PRESENT IN PREVIOUSLY DRIED SOLVENTS WITH ACCESS OF AIR (E.G., 0.001-0.002 AND 0.01-0.015 VOL PERCNET IN HEXANE AND PHME, RESP.) CAUSED SIGNIFICANT ALTERATION IN THE FLUORESCENCE SPECTRA AND FLUOROMETRIC BEHAVIOR OF THE N SUBSTITUTED AMINOPHTHALIMIDES.

UNCLASSIFIED

1:2 022 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SYNTHETIC SUBSTITUTES FOR COMPONENTS OF CARDIOLIPIN ANTIGEN -U-
AUTHOR-(02)-REZNIKOVA, L.S., SHVETS, V.I.
COUNTRY OF INFO--USSR R
SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 3, PP 58-62
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ANTIGEN, DRUG TESTING

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1475 STEP NO--UR/0206/70/000/003/0058/0062
CIRC ACCESSION NO--AP0101561
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0101561

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF SUBSTITUTES OF THE COMPONENTS OF CARDIOLIPIN ANTIGEN (CARDIOLIPIN AND LECITHIN) WAS CARRIED OUT. NINE SUBSTITUTES OF CARDIOLIPIN AND 3 SUBSTITUTES OF LECITHIN WERE PREPARED AND TESTED IN DIFFERENT RATIOS AND COMBINATIONS. THE BEST RESULTS WERE OBTAINED WITH TWO SUBSTITUTES OF CARDIOLIPIN (DIPHOSPHATIDYLGLYCEROL AND BISPHOSPHATID ACID) IN COMBINATION WITH L, ALPHA, DIOLEOIL, LECITHIN SUBSTITUTE OF LECITHIN. TESTING OF THESE ANTIGENS IN THE WASSERMANN TEST WITH 1720 DIFFERENT SERA DEMONSTRATED ALMOST COMPLETE (99.6PERCENT) COINCIDENCE OF THE RESULTS OBTAINED WITH SYNTHETIC SUBSTITUTES AND THE NORMAL CARDIOLIPIN ANTIGEN. SYNTHETIC SUBSTITUTES ARE CHARACTERIZED BY THE PERMANENT COMPOSITION WHICH MAKES THEM SUPERIOR TO NATURAL COMPONENTS. THE COMPOSITION OF WHICH MAY CHANGE.

UNCLASSIFIED

USSR UDC 616-008.922.1.04-092.9-003.96-07:616.831-003.92-074

SIMANOVSKIY, L. N., OZIRSKAYA, Ye. V., and REZNIK, L. V., Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad

"Metabolic Changes in the Rat Brain During Adaptation to Hypoxia"

Moscow, Voprosy Meditsinskoy Khimii, Vol 19, No 2, Mar/Apr 73, pp 156-162

Abstract: The investigation was conducted on white rats kept in a barochamber at a pO_2 equivalent at 2,000-7,600 m altitude for 3-90 days. In cortical and medullary mitochondria, oxidation, phosphorylation, and the P/O ratio decreased on the 3d-10th days and returned to normal on the 30th day. On the 60th and 90th days, oxidation and phosphorylation increased, but the P/O ratio was somewhat reduced. Electron microscopy revealed no morphological changes in the mitochondria. In the hyaloplasm of cortical and medullary neurons, the rate of glycogenolysis and glycolysis increased on the 3rd to 30th days and returned to normal on the 60th day. On the 90th day, there was a second though small increase in glycogenolysis. In brain tissue homogenates, malate and isocitrate dehydrogenase activity was reduced on the 10th day and returned to normal on the 20th day. Acetylcholine esterase activity gradually but continuously decreased, 1/2

USSR

SIMANOVSKIY, L. N., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 2, Mar/Apr 73, pp 156-162

with the fall becoming statistically significant as of the 30th day. Thus, during adaptation to hypoxia, definite metabolic changes take place in the brain tissue, which evidently increase the neurons' resistance to protracted hypoxia.

2/2

Therapy

USSR

UDC 616.921.5-085.373.6-039.71

REZNIKOVA, N. T., Chair of Faculty Pediatrics, Donetsk Medical
Institute

"The Use of Gamma Globulin to Prevent and Treat Influenza"

Kiev, Vrachebnoye Delo, No 7, 1971, pp 134-136

Abstract: Specific anti-influenza gamma globulin obtained from the serum of immunized donors with a high titer of antibodies against virus types A and B was administered once intramuscularly (1 ml) to 67 children under clinical observation for various diseases (rheumatic fever, chronic tonsillitis, rickets, nephritis, and so forth) or convalescing from a disease during an influenza epidemic in early 1970. Of these children, 15 became sick, as compared with 59 of 67 children in a control group. The disease ran three days, compared with ten in the control and the course was much milder. A group of healthy children (42) received antimeasles gamma globulin once (3 ml) during the same epidemic and 20 of them became sick (compared with 59 in the control). The disease persisted 5.5 days (10 days in the control). Still another group of children (11) were given anti-
1/2

USSR

REZNIKOVA, N. T., Vrachebnoye Delo, No 7, 1971, pp 134-136

influenza gamma globulin two days after they had contracted the disease. Their toxicosis disappeared within two days (after 4 to 5 days in the control), body temperature fell the second day, and there were no complications or side effects. Studies showed that anti-influenza gamma-globulin can be effectively used to treat children under clinical observation or those in a run-down condition during an outbreak of influenza.

2/2

- 86 -

AA0046414-

REZNIKOVSKIY, M.M.

UR 0482

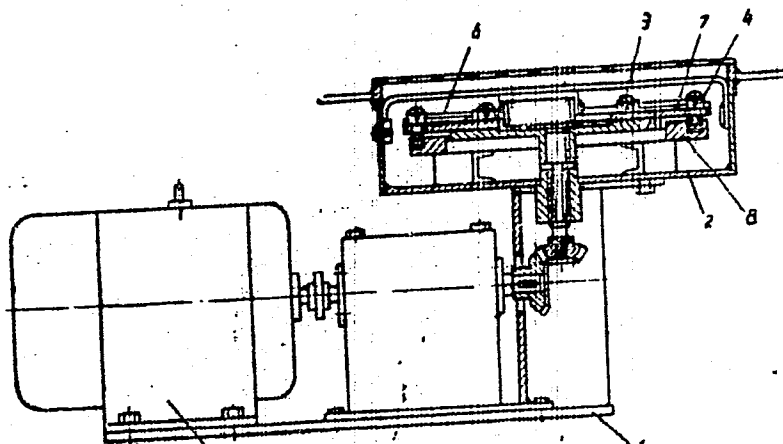
Soviet Inventions Illustrated, Section II Electrical, Derwent,

242477 DETERMINING THE RESISTANCE OF POLYMERS TO
CORROSIVE MEDIUM, where samples of articles
(5) are fixed to clamps (3) and (4). Clamps (3) .
are mounted on the revolving disc (7), clamps (4)
are moving in the groove in the immobile plate (8)
which is of sinusoidal or similar form in order to
change the distance between the clamps in suitable
manner. Chamber (2), housing the clamps and discs,
can be filled with corrosive media, and disc (7)
is revolved by motor (6) causing the clamps to put
oscillating loads on the samples. The measurement
data can be obtained by suitably placed strain
gauges.

2.2.66 as 1053420/23-5. A.N.GORDEEV et al. RUBBER &
LATEX RES. INST. (8.9.69) Bul 15/25.4.69. Class 42k.
Int.Cl.G 01 n.

19781618

AA0046414



MT

2/3

19781619

AA0046414

AUTHORS: Gordeyev, A. N.; Kozlov, I. I.; Orekhova, N. I.; Reznikovskiy, M. M.;
Smirnova, T. N.; Suzdal'nitskaya, Zh. S.; Fedyukin, D. L.; Shmulev, Yu. S.

Nauchno - Issledovatel'skiy Institut Rezinovykh i Lateksnykh Izdeliy

19781620

USSR

UDC 517.946

LAVRENT'YEV, M. M., Corresponding Member of the Academy of Sciences USSR, and REZNITSKAYA, K. G., Computer Center of the Siberian Department of the Academy of Sciences USSR, Novosibirsk

"Uniqueness Theorems of Some Nonlinear Inverse Problems of Parabolic-Type Equations"

Moscow, Doklady Akademii Nauk SSSR, Vol 208, No 3, 1973, pp 531-532

Abstract: The article considers inverse problems for parabolic-type equations when the solution is considered to be known at some fixed point of space at every moment of time. Analogous problems for hyperbolic-type equations were considered previously by V. G. ROMANOV and A. S. BLAGOVESHCHENSKIY.

1/1

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DIFFERENTIAL MICROCALORIMETER FOR CONDUCTING QUANTITATIVE
THERMOGRAPHY -U-
AUTHOR-(03)-REZNITSKIY, L.A., KHOLLER, V.A., FILIPPOVA, S.YE.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 534-5
DATE PUBLISHED-----70
SUBJECT AREAS--METHODS AND EQUIPMENT
TOPIC TAGS--CALORIMETER, THERMOGRAPHIC ANALYSIS, THERMAL EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/0216 STEP NO--UR/0076/70/044/002/0534/0535
CIRC ACCESSION NO--AP0127827
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 011

CIRC ACCESSION NO--AP0127827

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE MICROCALORIMETER IS OPERATED IN THE 25-700DEGREES RANGE WITH CONST. RECORDING OF EFFECTS. THE THRESHOLD SENSITIVITY OF THE DEVICE IS 4 MU V-MM, AND THE MAGNITUDE OF HEAT EFFECTS IS 25-40 CAL. THE MEAN DEVIATION OF EXPTL. DATA FROM THE LITERATURE VALUES IS SIMILAR TO 9PERCENT; THE AREA OF THE PEAK IS 850-1350 MM PRIMEZ. SAMPLES IN QUARTZ AMPULS WEIGH 0.6-6.0 G. FACILITY: KHIM. FAK., MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 638.61

BUDOVSKIY, I. I., MAKOSSEVSKIY, V. V., MELISHCHUK, I. S., REZNIITSKIY, M. S.,
SOLOMKO, A. A., TRON'KO, V. D., PALENCHUK, M. R., Kiev State University

"A Meter for Determining High-Frequency Power Transmission With the Use of
a Laser Signal"

Moscow, Pribery i Tekhnika Eksperimenta, No 3, May/Jun 72, pp 110-112

Abstract: The paper describes an instrument for measuring high levels of power passing through transmission lines which operate in the 10 kHz - 30 MHz range. The meter is shown schematically in Fig. 1a. A laser beam with wavelength $\lambda = 1.15 \mu$ passes successively through electro-optical and magneto-optical crystals of GaAs and $Y_3Fe_5O_{12}$ located between polarization prisms P_1 . The relative intensity of the laser signal at the output of the optical system is $S/S_0 = [A - B(1 - \cos \Delta\varphi)] [1 + \cos 2\delta]$, where $A = 1/2 \cos^2(\alpha - \beta)$, $B = 1/4 \sin 2\alpha 2\beta$, $\Delta\varphi = \Delta\varphi_0 + \Delta\varphi_V$, $\Delta\varphi_0$ is the phase shift which is independent of the field, $\Delta\varphi_V$ is the phase delay induced by the electric field, $\delta = \gamma + \Delta\phi_I$, $\Delta\phi_I$ is the rotation of the polarization plane of the optical beam determined by the Faraday effect and dependent on the current in the magnetizing system, γ is the angle between polarization prisms P_2 and P_3 , α and β are the angles

1/4

USSR
BUDOVSKIY, I. I. et al., Pribery i Tekhnika Eksperimenta, No 3, May/Jun 72,
pp 110-112

between the axis x_1 of the GaAs crystal and polarization prisms P_1 and P_2 .
Angles α , β and γ are illustrated in Fig. 1b.

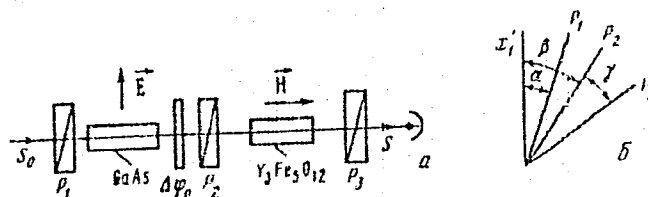


Fig. 1: a--schematic of the power meter; b--relative orientation of the polarizers.

A diagram of the power meter is shown in Fig. 2. The unit is a section of coaxial channel with wave impedance of 75Ω with rectangular inner conductor 4 fastened between washers 2. Crystals of GaAs 6 and $Y_3Fe_5O_{12}$ 7 are fastened to inner conductor 4 at right angles to each other. The crystals measure 2×2 mm in cross section. The GaAs crystal has a 45° cut which acts as a rotating mirror. Conductive cement is used to fasten electrode 5 to

2/4

- 116 -

3

USSR

BUDOVSKIY, I. I. et al., Pribory i Tekhnika Eksperimenta, No 3, May/Jun 72, pp 110-112

the top of the GaAs crystal. The electrode is connected to the outer conductor 3. The central polarizer P_2 is a polaroid film 11, cemented between two crystals. Polarization prisms 10 and 8, as well as $\frac{1}{4}$ -wave plate 9, are used for the necessary adjustment. The meter is connected to the coaxial channel by means of rf disconnects 1.

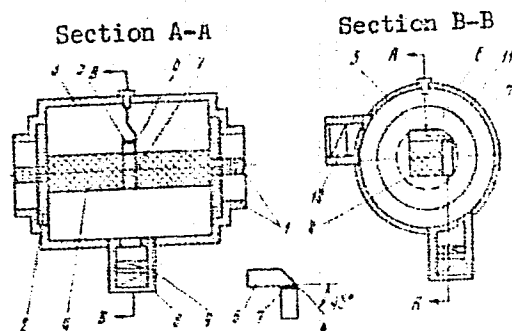


Fig. 2. Simplified diagram of the power meter.

3/4

(3)

USSR
BUDOVSKIY, I. I. et al., Pribory i Tekhnika Eksperimenta, No 3, May/Jun 72,
pp 110-112

A study of the frequency response of the meter showed a sharp drop in the band above 600 kHz. This is caused by a temperature increase due to losses from high hysteresis impedance. This impedance is appreciably reduced by placing the $Y_3Fe_5O_{12}$ crystal in a transverse magnetic field. The optimum field strength was found to be close to 500 oersteds.

4/4

- 117 -

1/2 025
UNCLASSIFIED
PROCESSING DATE--18SEP70
TITLE--USE OF EMULSIONS OF SILICO ORGANIC COMPOUNDS IN VIROLOGICAL
PRACTICE -U-
AUTHOR-(04)-KRISTAPSON, M.ZH., RUMYANTSEVA, N.P., REZNIYEKS, A.A., ATRENA,
A.K.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 1, PP 116-120
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, VIROLOGY, ORGANOSILICON COMPOUND, WHOLE BLOOD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0065

STEP NO--UR/0402/70/000/001/0116/0120

CIRC ACCESSION NO--AP0103745

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103745

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS THE RESULTS OF TESTS OF NATIONAL SILICO ORGANIC COMPOUNDS OR CILOYANES FOR PRODUCTION OF NATIVE PLASMA FROM THE WHOLE BLOOD AND TESTS OF THEIR TOXICITY FOR TISSUE CULTURES.

89

UNCLASSIFIED

R
USSR

UDC 576.858.093.1:647.1.126

KRISTAPSON, M. SH., RIMYANTSEVA, N. P., REZNIYENS, A. A., and ATRENA, A. K., Institute of Microbiology imeni Avgust Birkensteyn, Academy of Sciences, Latvian SSR

"Use of Emulsions of Organosilicon Compounds in Virological Practice"

Moscow, Voprosy Virusologii, No 1, 1970, pp 116-119

Abstract: A transparent, rapidly coagulating plasma was obtained from the blood of humans and some animals (horses, rams) using a variety of siloxane emulsions. In some cases horse's blood separated the plasma without centrifugation, simply by being allowed to stand in a refrigerator at 4° C. The plasma coagulated and acquired a jelly-like consistency. Clotting time in test tubes with a siloxane coating was considerably longer as compared with the control (10-15, 8-10, and more than 30 min for human, ram's and horse's blood, respectively). In toxicity tests, plasma obtained with the use of silicones was added to cultures of human embryonic fibroblasts and chick embryos. In some cases cell suspensions were added directly to test tubes treated with silicones. No signs of degeneration or other significant changes were noted in the tissue cultures.

1/1

1/2 021 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--LIGHT PRESSURE EXERTED BY STARS ON SPHERICAL DUST PARTICLES IN
INTERSTELLAR SPACE -U-
AUTHOR--(02)--DYVARY, N.B., REZNOVA, L.V.
COUNTRY OF INFO--USSR
SOURCE--ASTRONOMICHESKII ZHURNAL, VOL. 47, NO1, 1970, P 166-171
DATE PUBLISHED-----70
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--INTERSTELLAR MATTER, HOT STAR, PRESSURE, DUST, GRAVITATION,
COSMIC DUST
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1734 STEP NO--UR/0033/70/047/001/0166/0171
IRC ACCESSION NO--AP0115563
UNCLASSIFIED

2/2 021

IRC ACCESSION NO--AP0115563

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DETERMINATION OF THE RATIOS OF THE LIGHT PRESSURE TO THE GRAVITATIONAL FORCE OF STARS OF VARIOUS SPECTRAL CLASSES FOR SPHERICAL WATER, QUARTZ, AND GRAPHITE PARTICLES. THE RATIOS ARE CALCULATED ON THE BASIS OF EXACT FORMULAS IN THE MIE THEORY FOR COMPLEX REFRACTIVE INDICES DEPENDING ON THE WAVELENGTH. IT IS SHOWN THAT FOR STARS OF EARLY SPECTRAL CLASSES, THE LIGHT PRESSURE EXCEEDS THE GRAVITATIONAL FORCE BY SEVERAL ORDERS OF MAGNITUDE. THIS MEANS THAT THE PARTICLES WILL BE EXPELLED FROM HOT STARS. FACILITY: ODESSKII POLITEKHNICHESKII INSTITUT, ODESSA, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC 669.083.4

R
REZNYAKOV, A. A., ISAKOVA, R. A., YESYUTIN, V. S., NESTEROV, V. N., NECHIPORENKO, G. I., MOROZOV, I. F., ZHUKOV, P. I., ZAVADSKAYA, N. F., and KALININ, V. Ya.

"Increasing the Effectiveness of Vacuum Refining of Selenium"

Moscow, Tsvetnyye Metally, No 1, Jan 70, pp 54-57

Abstract: Data were obtained which confirm the results of previously conducted laboratory investigations regarding the possibility of producing high-quality commercial Se in a single operation. At 450° and a vacuum of 0.6 mm Hg, the output of the apparatus was 2 t/m² per day. The yield of high-quality Se was 80%; highly volatile fractions and mother liquor accounted for 15 and 5%, respectively. During prolonged operation of the apparatus the disks overgrown with shelliness, which formed as the result of the precipitation of metal selenides suspended in Se. An investigation of the filtration of fusion and vapors of Se showed that it is possible to produce high-quality commercial Se in a single operation. The process has been introduced into Se production.

1/1

USSR

UDC: 669.245'27'292.018.67(088.8)

NAM, B. P., D'YAKOV, I. G., IVANOV, V. I., POZDNYAKOV, V. V., REZONTOV, B. I.,
GORBUL'SKIY, L. F.

"Alloy for the Centers of the Oxide Cathodes of Electric-Vacuum Devices"

USSR Author's Certificate Number 358397, Filed 23/07/70, Published 18/01/73
(Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No
8I711P, by O. Pimenova).

Translation: An alloy is suggested for the cores of the oxide cathodes of electric vacuum devices, differing from known alloys in that in order to improve the sublimation characteristics of the core, increase the stability of the electrical parameters and the durability of electric-vacuum devices, V is introduced in the following ratio of components (%); W 2.0-4.0, V 0.05-0.8, Ni -- remainder. The mechanical properties in the annealed state are: σ_b 42, 20 and 11 kg/mm², δ 45, 43 and 36% at 20, 600 and 800° respectively; in the cold worked state σ_b 79 kg/mm², δ 2% at 20°, ρ at 20, 600 and 800° 0.174, 0.462 and 0.518 ohm·mm²/m respectively, T_{recr} 600°. The rate of evaporation of the activator (in mg·cm²/hr) in a vacuum of $1 \cdot 10^{-7}$ mm hg is $1.5 \cdot 10^{-8}$ at

1/2

USSR

Nam, B. P., D'yakov, I. G., Ivanov, V. I., Pozdnyakov, V. V., Rezontov, B. I.,
Gorbul'skiy, L. F., USSR Author's Certificate Number 358397, Filed 23/07/70,
Published 18.01/73.

750°, $1.7 \cdot 10^{-7}$ at 840°, $2.7 \cdot 10^{-6}$ at 930° and $8.3 \cdot 10^{-6}$ at 1000°.

2/2

- 84 -

USSR

UDC 669.245'27'296:669.018.2:669.018.6

NAM, B. P., D'YAKOV, I. G., POZDNYAKOV, V. V., REZONTOV, B. I., and IVANOV, V. I.

"Preparation of Vacuum-Melted Ni-W-Zr Alloys for Oxide Cathode Bases and Their Investigation in Experimental Instruments"

Elektron. tekhnika. Nauchno-tekhn. sb. Materialy (Electronic Engineering. Collection of Scientific and Technical Works on Materials), 1970, vyp. 2, pp 9-15 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I857 by the authors)

Translation: The authors describe the preparation of Ni-W-Zr alloys with impurity content $\leq 0.05\%$ intended for use as oxide cathode bases of electric vacuum devices. Some physical and mechanical properties of the alloys under study are presented, as well as test results of the alloys in experimental diodes. From the standpoint of assuring stable protracted operation of an oxide cathode, the alloy Ni + 4Zr + (0.06-0.1)%Zr possesses the best properties. This alloy has a high recrystallization temperature and high strength at operating temperatures.

1/1

USSR

UDC 681.327.22:003:778.588

REZORENOV, A. A.

"A Cell for Recording Code Pulses With a Strobotron or a Digital Optical Recording Systems"

Yacheyka zapisi kodovykh impul'sov so strobotronom dlya tsifrovoy opticheskoy sistemy registratsii (cf. English above), Institute of Earth Physics of the Academy of Sciences USSR, Moscow, 1972, 18 pp, ill., 3 ref. (Manuscript deposited at VINITI No 4413-72, 31 May 1972) (from RZh-Avtomatika, tele-mekhanika i vychislitel'naya tekhnika, No 11, Nov 72, Abstract No 11B371 DEP)

Translation: Engineering data, the circuitry, a description of the operation, and test results of cells of code pulses intended for display on a moving photographic film of information represented in digital binary code are presented. The cells are incorporated in an experimental three-channel installation developed at the Institute of Earth Physics. A strobotron is applied as a light source in the cell. The strobotron is actuated by a high-voltage pulse flip-flop connected to the output of a transistorized pulse amplifier. The amplitude of the actuated pulse emitted by the flip-flop is equal to ~ 6 kV. The design of the pulse flip-flop, a technique for calculating it approximately, and a comparison of calculations with experiments are given. Author's abstract.

1/1

USSR

UDC 621.313:621.3.019.3.001.4

MARINCHKIN, V. P., Candidate of Technical Science, OSIPOVICH, V. T., Engineer,
and REZTSOVA, M. V., Engineer

"Standardization of Accelerated Methods of Testing Electric Machines for Reliability"

Moscow, Elektrotehnika, No 6, June 1971, p 60

Abstract: The All-Union Scientific-Research, Planning-Design and Technological Institute of Crane and Traction Electrical Equipment developed a state standard which defines unified, accelerated methods for testing the reliability of crane, asynchronous electric motors for general industrial and metallurgical use. Statistical data gathered by the institute show that 90% of motor failures are caused by winding damage. The accelerated testing-methods developed took ten years of testing using more than 150 MT(K) type electric motors. The resulting test cycle consists of a 14 day period. The test data serves as the basis of GOST-16709-71 "Crane, Asynchronous Electric Motors (General Industrial and Metallurgical)." The tests conducted according to the new standard make it possible to determine, for example, failure-free operation of electric motors within 2-4 months after the beginning of testing. Earlier it took 1.5-2 years of continuous testing to obtain the required results. GOST-16709-75 went into effect as of 1 July 1971. The quantitative indices of reliability of GOST-185-70 for crane and metallurgical

1/2

USSR

MARINCHKIN, V. P. et al., Elektrotehnika, No 6, June 1971, p 60

alternating current motors will be brought into compliance with GOST-16709-71. No new test equipment will be necessary at the manufacturing plants since existing test equipment can do the job. Work on setting up unified standardized methods for testing the reliability of electric machines is continuing.

2/2

- 32 -

Pesticides

USSR

UDC 632.951:542.432

REZUNENKO, O. A., TRET'YAK, M. G., SHOKOL, V. A., Institute of Organic Chemistry, Academy of Sciences of the UkrSSR


"Identification and Quantitative Determination of Demuphos in Water"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 5, 1973, pp 44-45

Abstract: A method is given for determining Demuphos (dimethyl-N-methylisopropyl urethane phosphate) in the water of reservoirs and effluents. The Demuphos was extracted with carbon tetrachloride. A 3:1 hexane-acetone mixture ($R_f=0.53$) was used to identify the chemical in water. The sensitivity of the chromatographic method is $7.5 \cdot 10^{-2} \mu\text{g}$. Quantitative determination of Demuphos in water is done by the method of wet combustion analysis with potassium persulfate followed by colorimetric determination of the phosphorus-molybdenum complex.

1/1

USSR

 UDC 616-00128+612.419

RYABUKHA, A. K., and REZVAYA, S. P.


"The Question of the Mechanism of the Therapeutic Action of Transplanted Hematopoietic Tissues in Irradiation Traumata"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 1, 1970, pp 244-246

Abstract: Because of diverse theories concerning the therapeutic effect of transplanted tissues, a method was devised which excludes migration of cells, using a ring chamber 21-25.5 mm in diameter and 5 mm high, both sides of which were closed by a 45/100 millipore filter, precluding cell diffusion. Before irradiation, bone marrow was obtained from tibias and kept in solution at 4°C. Upon irradiation of rats, chambers containing 20-25 million live cells were surgically placed within the animals. Controls received empty chambers. During the 2-day observation period, all groups were kept under ordinary conditions. All rats receiving 600 r died within 6-12 days. Of the 39 treated animals and 40 controls receiving 500 r., 41% of treated and only 10% of controls survived 21 days. Inasmuch as the cells could not migrate from the chambers, it is evident that the therapeutic effect is due to the vital activity products of the bone marrow. 1/1

USSR

UDC 621.376.32(088.8)

REZVETSOV, N. B. 

"Device for Receiving Signals with Multiposition Frequency Manipulation"

USSR Author's Certificate No 253165, Filed 12 Apr 68, Published 24 Feb 70
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D240P)

Translation: This author's certificate introduces a device for receiving signals with multiposition frequency manipulation containing a binary circuit for division of the standard frequency, switching circuits and series connected mixing cascades. In order to reduce the occupied frequency band while keeping the given informativeness of the communication channel and for simultaneous facilitation of the exchange of generated frequencies, with variations of the speed of the digital information transmission system, the binary frequency division circuit is executed as two-channel made of triggers the counting inputs of which are connected to the counter phase outputs of the trigger preceding the frequency division cascade, and the outputs of the frequency division triggers are connected to the inputs of the switching circuits and mixing cascades via low frequency smoothing filters. A device is proposed as described above distinguished by the fact that each of the mixing cascades contains quadrature phase modulators executed from two balance modulators.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--STUDY OF THE PROCESS OF PURIFICATION OF MOLYBDENUM FROM CARBON
IMPURITIES BY THE METHOD OF SECONDARY ION ION EMISSION -U-
AUTHOR-(04)-KULOT, V.YA., TATUS, V.I., RIBALDO, V.E., FOGEL, YA.M.
COUNTRY OF INFO--USSR
SOURCE--UKRAINS'KII FIZICHNII ZHURNAL VOL. 15, FEB 1970, P. 266-268
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--MOLYBDENUM, OXIDATION, CARBON, CHEMICAL PURIFICATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1394 STEP NO--UR/0185/70/015/000/0266/0268
CIRC ACCESSION NO--AP0107867
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 020

CIRC ACCESSION NO--AP0107867
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. DESCRIPTION OF EXPERIMENTS IN WHICH A METHOD OF SECONDARY ION EMISSION DESCRIBED BY FOGEL' (1967) WAS APPLIED IN STUDYING THE PROCESS OF REMOVAL OF CARBON IMPURITIES FROM MOLYBDENUM FOIL SAMPLES AT 1900 DEG K IN OXYGEN. DECARBONIZATION OF SAMPLES WAS CONTROLLED IN THESE EXPERIMENTS BY MEASURING THE SECONDARY CARBON ION BEAMS WITH THE AID OF A MASS SPECTROMETER. THE AMOUNTS OF CARBON RETAINED BY MOLYBDENUM SAMPLES AFTER A 6 HR HEATING WERE FOUND TO BE LOW ENOUGH TO HAVE NO EFFECT ON MOLYBDENUM OXIDATION.

FACILITY: AKADEMIIA NAUK UKRAINS'KUI RSR, PIZIKO TEKHNIHNII INSTITUT, KHARKOV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC 621.384.633

DVORNIKOV, V. D., REZVOV, V. A., YUDIN, L. I.

"Current Micropulse Indications at Various Cyclotron Radii"

Moscow, Pribery i Tekhnika Eksperimenta, March-April, 1973, pp 41-44

Abstract: A description is given of the principal system developed by the authors for measuring the parameters of small bunchings of particle currents at various radii of the cyclotron in the Moscow Institute of Atomic Energy. The basic method of the system is the stroboscopic principle, discussed in an earlier article published in the journal noted above (I. D. Breslavtsev, et al, No 4, 1972, p 26). A block diagram of the system is given. To increase its sensitivity and to exclude the dependence of its input signal on the shift of the beam, two sensors were put at each radius, placed symmetrically with respect to the median density of the accelerator; preamplifiers were also used to help raise the sensitivity level. Basic schematic diagrams of the electronic equipment in the stroboscopic converter and frequency converter are also given. Results of measurements made with the device are presented. The authors thank N. I. Venikov and N. I. Chumakov for their support.

1/1

- 86 -

UDC: 621.374.2

USSR

BRESLAVTSEV, I. D., VENIKOV, N. I., DVORNIKOV, V. D., KULESHOV, I. L., LATUSHKIN, S. T., REZVOV, V. A., CHUMAKOV, N. I., and YUDIN, L. I.

"Use of 'Deviation Grouping' to Obtain Intense Short Neutron Pulses in the IAE Cyclotron"

Moscow, Pribery i Tekhnika Eksperimenta, No 4, July-August 1972, pp 26-31

Abstract: A system is described for the formation and diagnostics of a beam of neutrons using the method of deviation grouping. Similar to that of Karlsruhe, as described by S. Cierjacks et al (Rev. Scient. Instrum., 39, 1968, p 1279), the system involves a packet of ions cut by a pulsed voltage of an internal deflector and accelerated to the proper energy level. The ions are deflected vertically to a target whose thickness is larger than the ion path, and as a result of the impact of the particles on the target, short intense neutron pulses are obtained. A detector, recording the neutrons' energy spectrum, is placed at a distance of 13.5 m from the target. Unlike the Karlsruhe cyclotron, however, the IAE has two 180° duants, such that it is impossible to place all elements of the system in the space outside them. The setup

1/2

USSR

UDC: 621.374.2

BRESLAVTSEV, I. D., et al, Pribory i Tekhnika Eksperimenta, No 4, July-August 1972, pp 26-31

involving the IAE cyclotron is described, together with the electronic equipment, and a sketch of the instrumentation is given in block form. A neutron pulse frequency of as much as 110 kHz is obtained. The authors are associated with the Institute of Atomic Energy at Moscow.

2/2

- 77 -

1/2 049 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--MONITORING THE QUALITY OF POLISHED SURFACES BY MEANS OF A GAS LASER
-U-
AUTHOR--(02)--KONTSEVOY, YU.A., REZVY, R.R.
COUNTRY OF INFO--USSR
SOURCE--ZAVCD. LAB., 1970, 36, (1), 42-44
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, MATERIALS
TOPIC TAGS--METAL POLISHING, SILICON, GAS LASER, COHERENT LIGHT,
SEMICONDUCTOR MATERIAL
CENTREL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/0318 STEP NO--UR/0032/70/036/001/0042/0044
CIRC ACCESSION NO--AP0124077
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--20NOV70

2/2 049

CIRC ACCESSION NO--AP0124077

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A METHOD OF MONITORING THE QUALITY OF POLISHED SURFACES OF VARIOUS KINDS, INCLUDING METALLIC AND SEMICONDUCTING SURFACES, BY MEANS OF A GAS LASER IS DESCRIBED. THE QUALITY IS ESTIMATED BY OBSERVING OR PHOTOGRAPHING AN IMAGE OF THE TEST SURFACE IN THE REFLECTED COHERENT LIGHT OF THE LASER AND ANALYSING THE CHARACTERISTIC PATTERNS FORMED IN THE IMAGE. A TYPICAL EXAMPLE IS PRESENTED FOR A POLISHED SI PLATE.

UNCLASSIFIED

USSR

UDC: 621.317.715(088.8)

REZVYAKOVA, Z. N., POPOV, G. V.

"An Instrument for Measuring Random Signal Levels"

USSR Author's Certificate No 264542, filed 27 Apr 54, published 17 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A114 p)

Translation: This author's Certificate introduces a magnetoelectric instrument designed for producing uniform damping, reducing the time required for the coil to reach its position of rest, and giving readings which are a logarithmic function of the applied voltage. E. L.

1/1

USSR

UDC 619:614.485:613.643

IMMIYEV, YA., All-Union Scientific Research Institute of Veterinary Sanitation
and REZVYKH, A. G., Tomilinsk Poultry Farm

"Disinfection of Air in Intake Ventilation Ducts"

Moscow, Veterinariya, No 10, 1971, pp 28-29

Abstract: Ultraviolet irradiation (for 60 days) of air entering poultry houses containing 80,000 chicks 1 to 60 days old had a marked effect on the survival rate of the animals; only 1.7% died as compared with 4.32% of controls. The average weight of the experimental chicks was 16.3 g higher than that of controls. The carbon dioxide concentration of the air in the experimental poultry house did not exceed 0.14%, as compared with 0.2% in the control. The number of negatively and positively charged light ions in the experimental poultry house was twice that in the control, while the dust concentration was, respectively, 1.8 and 2.3 mg/m³. The savings from the higher survival rate and greater weight gains resulting from the use of bactericidal ultraviolet lamps far exceeded the costs involved.

1/1

- 81 -

USSR

UDC: 621.385:530.145.6:623.317.17

KONTSEVOY, Yu. A., REZVYY, R. R., GOLOLOBOV, V. M., and KUDRYAVTSEV,
Ye. N.

"Ellipsometric Control Methods Using a Laser"

Elektron. tekhnika. Nauchno-tekhn. sb. Upr. kachestvom i standar-
tiz. (Electronic Engineering, Scientific-Technical Collection,
Quality and Standardization Control) 1970, No. 2, pp 115-122
(from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3D393)

Translation: A description is given of laser ellipsometric micro-
scopes with beam incidence angles of 45 and 70°, designed for non-
destructive control of thickness and refraction indices of fine
transparent dielectric layers on the surface of semiconductors, as
well as for measurement of the uniformity of these parameters. A
system is given of graphic solution for an exact ellipsometry equa-
tion for germanium and silicon specimens. The utilization areas
of ellipsometers are examined. Resume

1/1

USSR

UDC: 534-8

ARVIN, G., PRIALGAUSKAS, I., and RIBIKAUSKAS, S.

"Use of Acoustical Methods for Bacterial Preparations"

Nauch. tr. vyssh. ucheb. zavedeniy LitSSR. Ul'trazvuk (Scientific Works of the Lithuanian VUZ; Ultrasonics) No 4, 1972, pp 85-91 (from RZh--Fizika, No 4, 1973, Abstract No 4Zh594)

Translation: A pulse device with a chamber of small volume for measuring ultrasonic absorption in biological materials is described. Results are given of measurements of the velocity and absorption of sound in salmonella vaccine, salmonella diagnostica, and in dry horse serum, cultured in a physiological solution dependent on the concentration of microorganisms and the total quantity of albumen. The velocity was measured by a small-dimensioned ultrasonic interferometer at a frequency of 3 MHz, and the absorption was measured by a pulse device at frequencies of 15 and 45 MHz and at temperatures of 18.5 and 37°C. It was established that with the use of the velocity and absorption measurements, it is possible to determine the concentration of microbes in medical vaccines and diagnostica as well as the total amount of albumen in serum solutions. Bibliography of eight. Authors' abstract

1/1

- 10 -

Turbine and Engine Design

USSR

UDC: 621.165.018

LAVENEERC, V. D., ROMANOVSKIY, G. F., RIBLIN, E. P., and LIBERMAN, M. A.

"Evaluating the Effect of Blade Height of the Flow-Through Section on the Efficiency of Three-Ring Active Stages"

Tr. Nikolayev korablestroit. in-ta (Works of the Nikolayev Ship-Building Institute), 1972, vyp 64, pp 129-132 (from RZh-Turbostroeniye, No 5, 1973, Abstract No 5.49.33)

Translation: The authors present the results of a theoretical study on the effect of the blade height of the flow-through section on the economy of three-ring, low-consumption turbine stages operating at low velocity ratios. Graphic and analytic relationships are presented which make it possible to estimate the degree of effect of blade height on the coefficient of efficiency of a three-ring turbine in the design stage. Original article: 4 illus., 2 bibl. entries.

USSR

UDC 681.327.2.022

RICCARDI, Giuseppe, UKMAR, Boris, Ing. S. Olivetti and Co., Ltd., Italy
"A Memory Device"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 23, Aug 71, Patent No 310462, Division G, filed 24 Jun 67, published
26 Jul 71, p 208

Translation: This Patent introduces a memory device which contains storage modules whose memory elements are arranged in a circle and are connected to recording and readout mechanisms. The device also includes a drive and a control unit. As a distinguishing feature of the patent, the operational reliability of the device is improved by adding a tracking screw couple. The screw of this tracking mechanism is connected to a worm shaft in the readout mechanism, while the nut is connected to a worm shaft in the recording mechanism. Also added for operational reliability are mechanisms for keyboard interlock and readout delay. Follow-up levers in these mechanisms are coupled to one of the tapered surfaces of the nut in the tracking screw couple and also to the follow-up lever of the mechanism for actuating the clutch for the worm shaft

1/2

USSR

RICCARDI, G., and UKMAR, B., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 23, Aug 71, Patent No 310462, Division G, filed 24 Jun 67, published 26 Jul 71, p 208

drive in the readout mechanism. This latter follow-up lever is coupled
> to the other tapered surface of the nut and through a three-arm lever
to the follow-up lever of the keyboard interlock mechanism. Conventional priority from 26 Jun 66.

2/2

- 59 -

USSR

RICH, V.

"Diamond Whiskers"

Moscow, Khimiya i Zhizn', No 9, Sep 70, pp 2-6

Abstract: An official document published in Byulleten' Komiteta po Delam Izobreteniy i Otkrytiy pri Sovete Ministrov SSSR (Bulletin of the Committee for Inventions and Discoveries of the Council of Ministers USSR), No 8, 1970, in the section "Discoveries" announces the discovery of diamond whiskers by Boris Vladimirovich DERYAGIN, Corresponding Member of the Academy of Sciences USSR, V. M. LUK'YANOVICH, Doctor of Chemical Sciences, Dmitriy Valerianovich FEDOSEYEV, Candidate of Technical Sciences, Vadim Aleksandrovich RYABOV, Candidate of Technical Sciences B. V. SPITSYN, Candidate of Chemical Sciences, and A. V. LAVRENT'YEV (all of the Institute of Physical Chemistry, Academy of Sciences USSR, Moscow). Priority of discovery: 14 April 1967. The idea of the discovery is that "if there is a diamond seed crystal, its growth can also take place in the region of diamond metastability, for example at atmospheric pressure of below, if the flux of carbon atoms to the faces of the diamond is not too great." The apparatus in which the diamond whisker is grown consists of several

1/2

USSR

RICH, V., Khimiya i Zhizn', No 9, Sep 70, pp 2-6

cubic meters of a "rather ordinary looking" laboratory, enclosed in metal casing. Outside the casing is a parabolic mirror which focuses heat emitted by a zenon lamp on the small crystal. The diamond whisker grows in three hours. The rate of growth is very rapid, sometimes reaching a quarter of a millimeter an hour.

2/2

- 88 -

USSR

UDC 547.834.4+541.634

MIKHLINA, YE. YE., YANINA, A. D., ALEKSEYEVA, L. M., TURYNIN, K. F., SHEYNKER, YU. N., YAKHONTOV, L. N., DYUK, R. F., RICHARD, A. YA., and KATRITSKIY, A. R.,
All-Union Scientific Research Pharmaceutical Chemical Institute imeni S.
Ordzhonikidze, Moscow and Chemistry Department, University of East Anglia at
Norwich, Great Britain

"Reaction of Benzo [b]quinuclidine with Electrophilic Reagents"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, Academy of Sciences Latvian
SSR, No 3, 1971, pp 385-388

Abstract: Electrophilic substitution of benzo [b] quinuclidine (I) was studied: bromination, nitration, and sulfochlorination. These results are closely related to the absence of p- π electron interaction in I. When I is brominated in several different solvents (acetic acid, chloroform) at 0, 20, and 60° (with or without catalysts), only the perbromide of I and a molecular complex of I with bromine were obtained. The absence of the p- π mesomeric effect in I is shown by its pK. In contrast to bromination, nitration and sulfochlorination of I form products of electrophilic substitution. When I is treated with a nitrating mixture at temperatures from -4 to -7°, mononitrobenzo [b] quinuclidine is formed. When I is treated with chlorosulfonic acid, first at 0° and then at 50°, benzo [b]quinuclidine-sulfonyl chloride is formed.

1/1

USSR

RICHTER, KNUT

"Solution of One Deterministic Dynamic Problem of Production and Warehousing"

Wiss. Z. Techn. Hochshch. Karl-Marx Stadt [German], 1971, Vol 13, No 1, pp 117-125 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V555).

Translation: The properties of the solutions of one version of the problem of warehousing with linear limitations and nonlinear goal function including fixed payments are established, and an algorithm is indicated, utilizing dynamic programming.

1/1

- 66 -

BIOLOGY

Agriculture

USSR

UDC 632.95

RIDER, V. A., Chief, Voronezh Plant Protection Station, and TARABRINA, A. M.,
Chief Agronomist

"For Efficient Use of Pesticides"

Moscow, Zashchita Rasteniy, No 6, 1970, pp 2-3

Translation: The systematic use of pesticides on large areas, without consideration for concrete conditions and without the required grounding in chemical treatment frequently has a large number of unfortunate results. For example, as a result of frequent use of pesticides, the pests develop a resistance to them and we are unable, even with the use of large-scale chemical production techniques to contain the further multiplication of harmful species. It is impossible to underestimate the danger of a massive chemical campaign to the natural environment as well as to humans. Therefore, efficient use of pesticides is the most urgent problem in plant protection. Voronezh entomologists, both scientists and practical workers, have been pursuing this goal for more than three years.

The total seeded area of the oblast is 3,259,000 hectares. The chief crops are grains, winter and spring wheat, barley, oats, and millet. Large areas are sown with peas, and lentils, kidney beans, and vetch are also planted. In all, grain

1/8

USSR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

and legume crops occupy about half of the total arable land. Among the commercial crops, sugar beets (200,000 hectares) and sunflowers (300,000 hectares) are most important. Fruit plantings occupy about 40,000 hectares.

These crops require intensive protection from pests and diseases. The grains may be damaged by [*Eurygaster integriceps*], grain beetles, sometimes by the turnip moth, frit and hessian flies, and the wheat-stem sawfly. The diseases noted include smut, hard smut and root rot.

Sugar beets need protection from sugarbeet fleas and weevils, and such leaf-eating cutworms as the cabbage moth, clover cutworm, and silvery moth. Peas suffer from pea weevils and aphids.

The basis of protective measures is a well developed set of agrotechnical and chemical measures. *Trichogramma* have been bred and released in the fields for more than ten years.

A table cites data on the area of the oblast under chemical treatment for the primary pests over the last ten years.

USCR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

Table One

	1960 r.	1961 r.	1962 r.	1963 r.	1964 r.	1965 r.	1966 r.	1967 r.	1968 r.	1969 r.
2 Обработано (тыс. га) 1	202.4	123.2	226.9	285.3	475.0	788.9	416.8	376.9	324.3	240.2
сахарной свеклы 4	—	—	6.1	94.1	89.2	106.6	57.8	23.6	32.1	9.7
зерновых 5	3.1	9.4	39.1	1.2	0.5	58	72.1	122.4	292.3	9.8
против черепашки 6	—	—	—	19.3	6.3	60.1	3.4	75.4	16.1	7.1
против хлебных жуков 7	24.6	21.9	30.4	52.2	51.6	75.4	64.5	56.4	62.3	66.3
садов										
Всего	230.1	154.5	302.5	452.3	621.5	1089.0	614.6	653.6	771.1	333.1

Key: (1) Treated area, in thousands of hectares; (2) Sugar Beets; (3) Peas;
(4) Grains; (5) Against Eurygaster; (6) Against Grain Beetles; (7) Orchards;
(8) Total.

It is clear that the volume of work in the campaign against sugar beet pests increased appreciably up to 1965, and then began to drop, until it was 240,000 hectares in 1969. Of course, the sharp upswing in 1965 is explained by the unprecedented scale of cabbage moth reproduction. But in subsequent years, as a result of improved agricultural technology, streamlining of the chemical campaign, and universal use of small troughs of fermenting treacle to catch cutworm butterflies, the volume of

USSR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

work has decreased. Specialists from the prognosis service and biological detachment followed the development of the insect, calculated its population and damage from the parasites. There has been no campaign against the silver y moth, because a large percentage of the caterpillars were destroyed by bacteriological diseases, tachina flies, and parasitic hymenoptera. That was the situation, for example, at the Yelanskiy Kolkhoz, Gribovskiy Rayon, which decided against the chemical campaign. The average silver y moth caterpillar population per plant was 0.8 (maximum of five), and the degree of destruction of these pests by bacteriological diseases reached 81%. At the Zarya and Put' K Kommunizmu kolkhozes, Anninskiy Rayon, Hymenoptera parasites destroyed 67% of the caterpillars. At the Bratkovskiy Kolkhoz, Ternovskiy Rayon, there were 1.2 moth, caterpillars per plant, but they were all destroyed by parasites. At the Krasnyy Oktyabr' Kolkhoz, Kantemirskiy Rayon, from 22 to 49 percent of moth, eggs were destroyed by natural trichogramma.

Formerly peas were sprayed and dusted against the pea weevil (*L.Bruchus pisorum*) over the entire area, for example, 106,000 hectares in 1965. Specialists from the signalization and prognosis service, and also scientific workers from the All-Union Institute of Plant Protection and the Scientific Research Institute of Agriculture imeni Dokuchayev determined that pea weevil beetles settle mainly around the edges of the fields in a zone 50-60 meters wide. Therefore chemical treatment

4/8

USSR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

is necessary only along the edges. The work of I. F. Pavlov and others established that chemical treatment of peas may be avoided successfully and replaced by cutting down of the contaminated sectors during the period when massive hatching of pea weevil larvae takes place (when massive multiplication of pea aphids does not occur). This method was used last year by the kolkhozes of Ramonskiy Rayon, except the Zarya Kolkhoz, and they prevented seed infestation by the pea weevil. The successful struggle with Bruchus was also aided by the fact that over the course of three years the right kind of gas was sprayed on the peas at the proper time.

We know that the use of proper agricultural technology creates conditions which do not permit the mass development of grain beetles. Stubble was stripped to a depth of 12-14 centimeters, in order to reduce the population of grain beetle larvae, on 1,154,000 hectares in Voronezhskaya Oblast in 1968 and 1,057,000 hectares in 1969.

The chemical campaign against Eurygaster integriceps is also limited, as can be seen from the table. Unfavorable winter conditions for the bug in 1968-1969 sharply reduced the numbers of this pest. After intensive observation of the appearance and development of the pests, the goal was set of using chemical treatment only in centers of contamination, where the bug population was greater than one per square meter for winter wheat and more than 0.5 for spring wheat, and where

5/8

USSR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

there were more than ten larvae during the time of leaf tube formation. With such a tactic it became possible to limit spraying to 10,000 hectares and reduce the damage to grain in comparison with the previous year.

Or here is another example. The year 1969 was a favorable one for the development of aphids on grain crops, especially on spring wheat. It seemed to certain agronomists that the grain was dying, and they began to call out the airplanes to "take care" of the enemy. But they failed to notice that there were also many allies of man in the fields, the aphid-eating ladybeetles and *Chrysopa vulgaris*. Fortunately, specialists from the plant protection station came in in time and canceled the chemical treatment. At kolkhozes of Khokhol'skiy and Semilukskiy rayons, where there were an especially large number of plant aphids, the harvest was excellent and the quality of the grain was not reduced. The same may be said concerning aphids on peas; the crop "recovered" from the damage and there was no reason at all to use chemical methods.

Voronezh entomologists are employing every means to see that wider use is made of surface vehicles which permit selective treatment of contaminated fields (especially along the edges). Preference is given to the spraying method, as a rule with small droplets. Last year, at the Rossiya Kolkhoz, Rossoshanskiy Rayon, a practical seminar for plant protection agronomists was devoted to small volume spraying.

6/8

The chemical struggle with orchard pests on farms of the oblast needs to be

USSR

RIDER, V. A., *Zashchita Rasteniy*, No 6, 1970, pp 2-3

intensified. Fruit plantings are treated on the average only twice, which is not enough. The use of trichogramma against the fruit moth [Tricidae] does not, under conditions in our oblast, give encouraging results, and without reliable chemical protection of orchards, the quality of apples is poor. Therefore, the use of chemicals in combatting pests and disease in orchards should be improved and its volume increased. Entobacterin is effective against the apple moth. This biological preparation also kills white cabbage butterflies, while trichogramma are used against the cabbage moth and other vegetable pests.

There is one sign of the more correct, efficient use of pesticides. Insecticide residues are found less often on agricultural products in quantities exceeding permissible levels. For example, according to data from the oblast sanitation and epidemiological station, excessive chemical residues were found in 47% of the selective checks made in 1965, 20% in 1966, 16% in 1967, 7.4% in 1968, and 2.9% in 1969.

In conclusion, we would like to say that our work in training plant protection workers for the kolkhozes and sovkhoses promotes the efficient application of chemicals (this was discussed in the last issue *Zashchita Rasteniy* for 1969).

We agree with Yul. Medvedev, author of the book *Bezmolvnyy Front* (The Silent Front), who writes, "Who is right in the endless quarrel between chemists and biologists? No matter how they may arrogate to themselves the position of defenders of

7/8

USSR

RIDER, V. A., Zashchita Rasteniy, No 6, 1970, pp 2-3

nature, there is no certainty that refusal to use chemical preparations will give a correct solution to the problem. But, remembering the 'secondary' effects as well as those signs of danger which chemical insecticides have shown, those scientists who are free of departmental fanaticism are united in the opinion that chemicals must be kept in their place, and the use of pesticides limited within reasonable boundaries. And, in order not to weaken the line of defense, other, non-chemical types of weapons must be improved and more extensively employed."

8/8

Polymers and Polymerization

USSR

UDC 547.622

RIED, W., and FREITAG, D., Institute of Organic Chemistry, Frankfurt University, West Germany

"Oligophenyls, Oligophenylenes and Polyphenyls -- A Class of Thermally Stable Compounds"

Moscow, Uspekhi Khimii, Vol 39, No 4, 1970, pp 662-678

Abstract: The article describes methods for the synthesis of oligo- and polyphenyls, as well as their physical properties and the relationship between the character of the addition of benzene rings and the thermal stability of the products. Classical and new methods for the synthesis of p-oligophenyls, linear m-oligophenyls, cyclic m-oligophenyls, linear o-oligophenyls, cyclic o-oligophenyls, highly arylated oligophenyls and p-polyphenyls are compared. The melting point of p-polyphenyls rises with an increase in the degree of polymerization. The introduction of methyl groups and addition in the meta position results in a lower melting point and improved solubility of the prod-

1/2

USSR

RIED, W., and FREITAG, D., Uspekhi Khimii, Vol 39, No 4, 1970, pp 662-678

ucts. o-Oligophenyls melt at lower temperatures than the p-isomers. p-Septiphenyl is the highest-melting of this class (melting point 545°).

The article was translated from the German by A. S. LEBEDEVA.

1/2 - 017 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--LIQUID PHASE OXIDATION OF ALIPHATIC KETONES -U-
AUTHOR--RIF; I.I., POTEKHIN, V.M., PROSKURYAKOV, V.A., MIKHEYENKO, T.I.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2), 372-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--OXIDATION, ALIPHATIC KETONE, THERMAL DECOMPOSITION, ORGANOLEAD
COMPOUND, ACETONE, CARBOXYLIC ACID, CHEMICAL REACTION MECHANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1217 STEP NO--UR/0080/70/043/002/0372/0377
CIRC ACCESSION NO--AP0104583
UNCLASSIFIED

2/2 - 017

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104583

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TITLE REACTION WAS INVESTIGATED ON 8, UNDECANONE (I) OBTAINED BY THERMAL DECOMP. OF PB CAPROATE. I (50 ML) WAS OXIDIZED WITH AIR (CONTINUOUS FLOW, 0.5 L.-MIN.) 3 HR AT 140 DEGREES-18 KG-CM PRIME² TO GIVE A MIXT. OF MONOCARBOXYLIC ACIDS (FROM ACETIC TO CAPROIC), GAMMA, METHYLBUTYROLACTONE, GAMMA, ETHYLBUTYROLACTONE, 3,6 AND 2,6, UNDECANEDIONES, GAMMA, OXOVALERIC, AND GAMMA AND DELTA, OXOCAPROIC ACIDS. THE PRESENCE OF THESE COMPS. PROVES THAT THE REMOTE (FROM C:O) CH. SUB₂ GROUPS ARE ATTACHED BY O, CONTRARY TO THE OPINION OF EARLIER AUTHORS STATING THAT IN THE OXIDN. OF THE ALIPHATIC KETONES, ONLY THE CH SUB₂ NEXT TO C:O IS OXIDIZED (ALPHA, MECHANISM). NO BETA, DIKETONES WERE FOUND IN THE PRODUCT; THEY ARE FORMED BUT UNDERGO OXIDATIVE DECOMP.

UNCLASSIFIED

USSR

UDC 66.045.1

RIFERT, V. G., PUKHOVOY, I. I., and BELIK, D. M.

"On Intensifying Heat Exchange in Surface Evaporators of Sea Water"

Kiev, Vestn. Kievsk. Politekhn. in-ta. Ser. teploenerg (Journal of the Kiev Polytechnical Institute, Series on Thermal Energy) No 7, 1970, pp 61-64 (Summary in English) (from Referativnyi Zhurnal - Thermal Power, No 5, May 71, Abstract No 5S 183).

Translation: A significant intensification of heat exchange in surface sea water evaporators is attained by using corrugated and rotating heat exchange surfaces. In this case it is possible to obtain a thin film of both the condensed warmed vapor and the evaporating fluid, as a result of which the over all coefficient of heat transfer is 5 - 10 times higher than that in evaporators with a submerged heating surface. Data on the condensation of steam on corrugated and rotating surfaces are extremely limited and contradictory, and on the boiling of liquid on such surfaces no data are available. The authors experiments in condensing steam on a rotating disk 300 millimeters in diameter showed that the coefficient of heat emission when steam condensed on a rotating surface was 3 - 5 times higher than for a smooth stationary surface. Results are also given from the study of heat transfer in the evaporation of water and a NaCl solution at a concentration of $38 \cdot 10^3$ milligrams per litre as a function of the rate of disk rotation over 1/2

USSR

RIFERT, V. G., et al., Kiev, Referativnyy Zhurnal - Thermal Power, No 5, May 71,
Abstract No 5S 183

the interval from 100 to 1900 rpm. The coefficients of heat emission obtained are
on the order of $(15 - 25) \cdot 10^3$ watts per square meter degree, with the coefficient
of heat transfer for the NaCl solution only 6 - 10% lower than that for pure water.
Two illustrations, seven bibliography entries.

2/2

- 51 -

USSR

UDC 633.11.631.527.5:632.4

RIGINA, S. I., and RIGIN, B. V., Candidates of Biological Sciences

"Wheat Hybrids Resistant to Powdery Mildew"

Moscow, Seleksiya i Semenovodstvo, No 1, 1972, pp 23-24

Abstract: In earlier work, wheat-rye amphidiploids (Triticale) highly resistant to powdery mildew were developed. Their resistance is ascribed to the presence of the rye genome, which includes genes of resistance to *E. graminis f. tritici*. Wheat-rye amphidiploids were then crossed with soft wheat. Among the hybrids obtained by crossing Triticale 25A020 with a constant intervarietal soft hybrid were soft wheat forms exhibiting a high degree of resistance to powdery mildew. These forms, with 42 chromosomes in the somatic cells, have now produced 11 generations of highly productive plants. Tests have shown that they are resistant to the various races of the agent of powdery mildew widespread in Leningrad Oblast.

1/1

- 17 -

USSR

UDC 633.11.631.527.5:632.4

RIGINA, S. I., and RIGIN, B. V., Candidates of Biological Sciences

"Wheat Hybrids Resistant to Powdery Mildew"

Moscow, Seleksiya i Semenovodstvo, No 1, 1972, pp 23-24

Abstract: In earlier work, wheat-rye amphidiploids (Triticale) highly resistant to powdery mildew were developed. Their resistance is ascribed to the presence of the rye genome, which includes genes of resistance to *E. graminis f. tritici*. Wheat-rye amphidiploids were then crossed with soft wheat. Among the hybrids obtained by crossing Triticale 25A/20 with a constant intervarietal soft hybrid were soft wheat forms exhibiting a high degree of resistance to powdery mildew. These forms, with 42 chromosomes in the somatic cells, have now produced 11 generations of highly productive plants. Tests have shown that they are resistant to the various races of the agent of powdery mildew widespread in Leningrad Oblast.

1/1

- 17 -

USSR

UDC 632.4.633.11

RIGINA, S. I., and KRIVCHENKO, V. I., Division of Immunity, All-Union
Institute of Plant Growing imeni N. I. Vavilov, Leningrad

"Physiological Specialization of *Erysiphe graminis* DC. f. sp. tritici
Marchal"

Leningrad, Mikologiya i Fitopatologiya, Vol 5, No 1, 1971, pp 42-47

Abstract: Infection with *Erysiphe graminis* DC. f. sp. tritici Marchal occurs in the USSR wherever wheat is grown, causing considerable damage. Effective chemical agents for the control of infection with this fungus do not exist; therefore varieties of wheat that are resistant to the infection must be developed. Five physiological races of the fungus were isolated at the Pushkino Laboratories of the All Union Institute of Plant Growing from the local population of *E. graminis* f. sp. tritici. These races (14, 16, 19, 32, and 35) were tested an assortment of wheat varieties. The wheat varieties Ulka, Normandie, Halle Stamm 13 471, and Weihenstephan H₁ were resistant to infection with all five races of the fungus. These varieties of wheat are of interest as donors of resistance genes in selection. Correlation of the data obtained with those given in the literature and based on use of similar assortments of wheat varieties for differentiation made it possible to deter-

1/2

USSR

RIGINA, S. I., and KRIVCHENKO, V. I., Mikologiya i Fitopatologiya, Vol 5,
No 1, 1971, pp 42-47

mine the distribution of 39 physiological races of *E. graminis* f. sp.
tritici in Germany (GDR and FGR), Scandinavia, England, Yugoslavia, Italy,
and the USSR.

2/2

- 37 -

1/2 037

UNCLASSIFIED

PROCESSING DATE--0900170

TITLE--STABILITY OF CYLINDRICAL SHELLS OF FIBERGLASS PLASTIC SUBJECTED TO
CREEP UNDER A PROLONGED EXPOSURE TO EXTERNAL PRESSURE -U-
AUTHOR--(02)--RIKARDS, R.B., TETERS, G.A.

COUNTRY OF INFO--USSR

SOURCE--MEKHANIKA POLIMEROV, VOL. 6, JAN.-FEB. 1970, P. 81-85

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--CYLINDRIC SHELL STRUCTURE, FIBERGLASS, CREEP, HYDROSTATIC
PRESSURE, NONLINEAR EQUATION, SHEAR STRESS, DIGITAL COMPUTER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1893

STEP NO--UR/0374/70/000/0001/0085

CIRC ACCESSION NO--AP0112373

UNCLASSIFIED

2/2 037

CIRC ACCESSION NO—AP0112873

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE BEHAVIOR OF A CYLINDRICAL SHELL UNDER EFFECT OF A PROLONGED/HYDROSTATIC PRESSURE, USING THE GEOMETRICALLY NONLINEAR EQUATIONS OF THE THEORY OF SHELLS OF A TIMOSHENKO TYPE. IN THESE SHELLS IT IS POSSIBLE TO MAKE ALLOWANCE FOR STRAINS DUE TO A TRANSVERSE SHEAR. A SYSTEM OF NONLINEAR DIFFERENTIAL EQUATIONS IS OBTAINED FOR DESCRIBING THE CHANGES IN THE SYSTEM WHEN SUBJECTED TO THE LOAD. SOLUTION IS OBTAINED BY MEANS OF A DIGITAL COMPUTER. THE CRITICAL TIMES FOR DIFFERENT LOADING LEVELS ARE OBTAINED.

FACILITY: AKADEMIJA NAUK LATVIISKOI SSR, INSTITUT MEKhanIKI POLIMEROV, RIGA, LATVIAN SSR.

UNCLASSIFIED

USSR

UDC 621.385

RIKENGLAZ, L.E.

"Method Of Successive Approximations In A Problem Concerning An Electron Beam"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works Of Educational Institutes.
Ministry of Communications, USSR), 1970, Issue 49, pp 217-219 (from
RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A135)

Translation: The use of a method of successive approximations is considered for solution of a problem concerning a beam of electrons in a vacuum between two plane electrodes (" $3/2$ law"). The convergence is demonstrated of the method of successive approximations, and on the basis of this method a precise analytical solution is found. Simple criteria are developed for evaluating the rate of convergence.
2 ref. G.B.

1/1

- 84 -

1/2 032
UNCLASSIFIED
TITLE—ELECTRON EXCITATION ENERGY TRANSFER IN LIQUID SOLUTIONS. III -U-
PROCESSING DATE--3000170
AUTHOR—(05)—AGREST, M.M., ANDREYESHCHEV, YE.A., KILIN, S.F., RIKENGLAZ,
M.M., ROZMAN, I.M.
COUNTRY OF INFO—USSR
SOURCE—IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 625-31
DATE PUBLISHED—70
SUBJECT AREAS—CHEMISTRY, PHYSICS
TOPIC TAGS—EXCITATION ENERGY, AROMATIC ETHER, CYCLOHEXANONE, ETHYLENE
GLYCOL, ETHANOL, SOLVENT ACTION, NAPHTHOL, ABSORPTION SPECTRUM,
FLUORESCENCE SPECTRUM, ELECTRON DONOR
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—2000/0972
CIRC ACCESSION NO—AP0124631
STEP NO—UR/0048/70/034/003/0625/0631
UNCLASSIFIED

2/2 032

CIRC ACCESSION NO--AP0124631

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THEORETICALLY DERIVED EXPRESSION FOR THE DISSOCN. OF THE EXCITED STATE OF THE DONOR MOL. IN THE PRESENCE OF ACCEPTOR MOL. IN WHICH THE ENERGY TRANSFER OCCURS EITHER THROUGH A LONG DISTANCE MECHANISM (DIPOLE DIPOLE INTERACTION) OR THROUGH MOL. COLLISION (EXCHANGE INTERACTION), WAS STUDIED BY EXAMG. 3 PAIRS OF DONOR ACCEPTOR SYSTEMS IN SOLVENTS OF VARIOUS VISCOSITY. THE SYSTEMS: (A) DIPHENYL ETHER-CYCLOHEXANONE IN ETHYLENE GLYCOL AND (B) IN ETOH; (C) AND (D), RESP., DIPHENYL ETHER-2,5-DIPHENYLOXAZOLE IN THE SAME SOLVENTS; (E) 2-NAPHTHOL-1,3,5-TRIPHENYLPYRAZOLINE IN ACOET, (F) ETOH, AND (G) N,BUGH, OR (H), (J), AND (K), RESP., IN THESE SOLVENTS BUT PURGED WITH N. THE ABSORPTION SPECTRA, FLUORESCENCE SPECTRA, QUANTUM YIELDS, DONOR FLUORESCENCE DECAY AND QUENCHING, AND SENSITIZATION OF THE ACCEPTOR FLUORESCENCE WERE MEASURED, YIELDING VALUES FOR ACCEPTOR CONCNS. FOR HALFQUENCHING THE FLUORESCENCE AND DATA ON THE MECHANISM OF ENERGY TRANSFER. GOOD AGREEMENT OF THEORY WITH EXPT. WAS FOUND FOR A AND B, WHERE THE LONG TANGE MECHANISM DOES NOT CONTRIBUTE AND ALSO IN D WHERE THIS MECHANISM PREVAILS. FOR E-K THE COLLISION MECHANISM IS NEGLIGIBLE. GOOD AGREEMENT WITH EXPT. IS FOUND FOR E-J BUT NOT FOR G AND K. THIS COULD NOT BE EXPALINED. THE CONTRIBUTION OF BOTH MECHANISMS TO THE INITIAL QUENCHING CONST. IS DISCUSSED.

UNCLASSIFIED

USSR

UDC 577.4

RIKHTER, KJUT

"Balancing Supply and Demand in the Presence of a Warehouse"

V sb. Primeneniye mat. v ekon. (Application of Mathematics in Economics -- collection of works), Vyp. 7, Leningrad, Leningrad University, 1972, pp 71-76 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V477)

Translation: A study was made of the criterion of existence of an available plan for a system of linear inequalities describing the warehouse problem.

1/1

- 44 -

RIKHTER, L. A.

JPRS 54786

23 December 1971

UDC 624.027.001.24

ON THE PROBLEM OF DETERMINING THE HEIGHT OF MULTIFLUE SMOKE STACKS
[Article by L. A. Rikhter, Doctor of Technical Sciences, Professor; Ye. L. Gavrilin, Engineer, Moscow Power Engineering Institute; Moscow, Teplotekhnika, Russian. No 8, 1971, pp 76-78]

A constant tendency toward the growth of single powers of thermal power stations with the wide use of sulfurous fuels and the absence of economical methods of sulfur trapping have led to the necessity of constructing high, expensive smoke stacks (of a height 250, 300, 350 m and more). The conclusion has been reached in many countries with a highly developed power system that it is necessary to build the minimum number of smoke stacks (one in the limit) and to make them multiflue to provide reliable power of the station. A unit of power 500-800 MW or two units of 300 MW each are connected to one flue of such a stack. The development of multiflue stacks involves the solution of many problems, one of which is the development of a technique for calculating the height to ensure the necessary scattering of harmful admixtures. The geometric height of a smoke stack (Fig. 1a) is found from the expression:

$$h = H - \Delta h,$$

(1)

where h is the effective height determined from the condition of ensuring established norms for the ground concentration of harmful admixtures in meters, and Δh is the rise of the flare above the opening of the smoke stack in meters.

Determining the value of H is not considered in this paper, since it does not involve the multiflue characteristic. For the variety of formulas proposed by different authors for calculating the height of the rise of the flare above the opening of the stack, the majority of these can be reduced to the following form:

- 1 -

[1 - USSR - G]

USSR

ELECTRICAL ENGINEERING
Equipment & Machinery

UDC 621.039.56

YEGOROV, K.V., RIKHTER, R.

"Comparative Analysis Of Some Structures Of The Automatic Power Control System
Of A Nuclear Reactor"

Tr.Mosk.energ.in-ta (Works Of The Moscow Power Institute), 1972, Issue 95, pp
79-83 (from RZh:Yadernyye reaktory, No 7, July 1972, Abstract No 7.50.68)

Translation: Some variations are compared of the structures of the automatic
power control system of an atomic power plant with a nuclear reactor based on
fast neutrons with a sodium coolant. Analysis of the results showed that the
structure and coefficient of the regulator of the vapor temperature has little
effect on the quality of regulation of the pressure and it is theoretically
possible to regulate the parameters of the vapor preceeding the turbine, and
the parameters of the nuclear reactor are independent of one another. The most
acceptable automatic power control system of a nuclear reactor for an atomic
power plant is recommended. 2 ill. 2 ref.

1/1

Environmental & Ecological Problems

USSR

UDC 614.72:621.311.21]-037

GIL'DENSKIOL'D, R. S., Candidate of Medical Sciences, RIKHTER, V. B., and
LEVKIN, V. P., Moscow Scientific Research Institute of Hygiene imeni
F. F. Erisman

"Possibility of Forecasting Atmospheric Pollution and Present-Day Hygienic
Preconditions for Estimating the Extent of Scattering of Emissions from
Regional Electric Power Stations"

Moscow, Gigiyena i Sanitariya, No 11, 1972, pp 14-18

Abstract: The maximum permissible concentrations of sulfur dioxide and nitric
oxide in the air near an electric power station, as set forth in official
instructions for establishing standards for gaseous emissions, were found to
be reasonably close to the values determined by actual measurements. Since
nitric oxide is invariably present in electric power plant emissions, it is
necessary to take into account the summation effect produced on the body by
this gas and sulfur dioxide when estimating the degree of atmospheric pollution
likely to result from the operation of a newly built electric power station.

1/1

Nuclear Physics

USSR

UDC: 53.07/.08+53.001.5

BLOKHIN, V. T., KATSAUROV, L. N., NECHAYEVA, L. P., ~~RIKHTER, V. Ye.~~
"A Method of Measuring the Beam Position During Acceleration in a Sectoral Cyclotron"

Kratkiye soobshch. po fiz. (Brief Reports on Physics), 1971, No 8, pp 26-30
(from RZh-Fizika, No 4, Apr 72, Abstract No 4A501)

Translation: A description is given of the method used on the three-section cyclotron model at the Physics Institute imeni P. N. Lebedev (Moscow) for determining the radial position (and orbit number) of the beam. The cyclotron uses pulse injection: the duration of the injecting beam is less, and the injection cycle repetition period several times greater, than the period of the accelerating voltage. For indication, the method used an electrostatic signal electrode and two opaque pickups which enable registration of the beam current and the visual observation of quartz plate fluorescence. By covering the beam with the opaque pickup and simultaneously using an oscilloscope to measure the time interval from the time of injection to the instant that the beam reaches the pickup, one can determine the radial position of the beam to within ± 2 mm when the orbit spacing is approximately 5 mm or more, including those cases in which the order of succession of the orbits is changed on certain azimuths because of radial fluctuations in the beam. V.N.K.

1/1

1/2 026
UNCLASSIFIED
TITLE--ELECTROLYTE FOR DEPOSITION OF INDIUM GALLIUM ALLOY -U-
PROCESSING DATE--20NOV70
AUTHOR--(05)-AKMENS, YA.P., MIKHALOVICH, D.L., RIKMAN, S.I., OZOLINSH,
I.M., UDEM, D.A.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 264,095
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--CHEMICAL PATENT, ELECTROLYTE, INDIUM ALLOY, GALLIUM ALLOY,
PHENOL, GLYCINE, INDIUM CHLORIDE, GALLIUM CHLORIDE, METAL DEPOSITION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1841
CIRC ACCESSION NO--AA0132106
STEP NO--UR/0482/70/000/000/0000/0000
UNCLASSIFIED

2/2 026
CIRC ACCESSION NO--AAC132106 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ELECTROLYTE FOR DEPOSITION OF
IN, GA ALLOY HAS THE FOLLOWING COMPN. IN CHLORIDE 50-150, GA CHLORIDE
2.5-25, GLYCINE 30-50, AND PHENOL 0.3-1 G-L. PROCESSING DATE--20NOV70

UNCLASSIFIED

Steels

USSR

UDC 669.15-194.26'24.046.56

FILIPPOV, S. I., and RIMKEVICH, V. S.

"Effect of the Components of a Chromium-Nickel Melt on the Kinetics of Complete Decarburization"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1971, pp 18-22

Abstract: The process of carbon oxidation in the presence of chromium and nickel plays an important part in the technology of melting stainless and heat-resistant steels. This study shows that patterns of critical concentrations determine both the mechanism and kinetics of an alloy melt. The below-critical region of carbon concentrations reveals three stages which can be affected by the alloying element. A change to the film process of indirect carbon oxidation at stages II and III practically eliminates the effect of the different intensities of the parallel oxidation of iron and chromium on the metal's decarburization rate. The inhibiting effect of chromium and the accelerating effect of nickel on the process of decarburization in the $C < C_{Cr}$ region have been revealed. The kinetic patterns of the interrelation between carbon and chromium oxidation processes have

1/2

USSR

FILIPPOV, S. I., and RIMKEVICH, V. S., Izvestiya Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1971, pp 18-22

been analyzed. The possibility is shown of accelerating the process of decarburization by feeding the oxidizing agent at lower rates and by involving hydrodynamic factors. Figures in the original article show the dependence of the decarburization rate on carbon content, the dependence of long [C] on time at various feeding rates of the oxidizer, the dependence of C_{Cr} and C_{Cr} on both carbon content and oxidizer feeding rates, and kinetic curves of carbon and chromium oxidation versus oxygen consumption (ml/min).

2/2

- 61 -

USSR

RIMSHA, V. A., SERGEYEV, B. G., KOMKOV, A. S.

UDC 621.396.67.095.1

"A Method of Forming Sum-and-Difference Diagrams on Higher Wave Modes"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 5, Feb 72, Author's Certificate No 327547; Division H, filed 19 May 69,
published 26 Jan 72, p 156

Translation: This Author's Certificate introduces a method of forming sum-and-difference diagrams on higher wave modes in a single-horn monopulse radiator. As a distinguishing feature of the patent, the method provides for direction finding and automatically tracking a signal source with arbitrary polarization. In the aperture of the radiator a superposition is excited from each difference channel in the form of two orthogonal fields displaced in phase by $\pi/2$ and having a zero in the plane of the orthogonal channel.

1/1

- 13 -

AA0043439-

Rimsha, V. P.

UR 0482

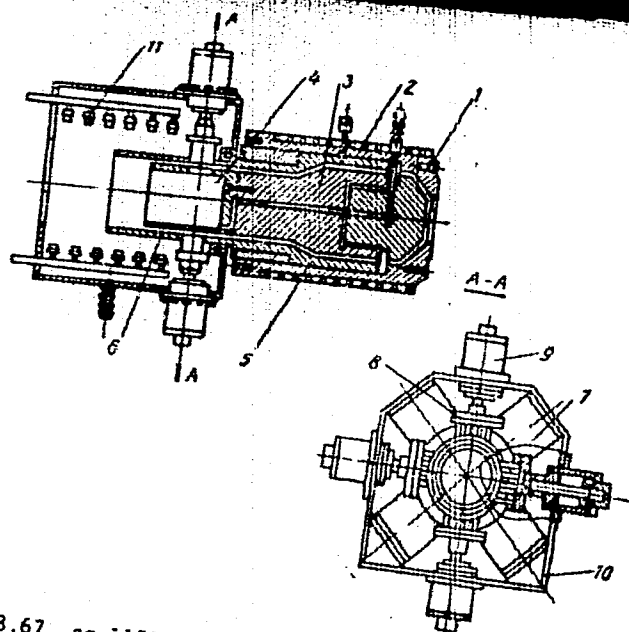
Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70

228261 EXTRUSION HEAD, e.g. for making tubes from thermoplastics material, consisting of the body section (1) containing electrical heating elements (2), distributing mandrel (3), and calibrated mandrel (4) which acts as the matrix during the perforation of the tube. In a concentric arrangement with the mandrel (4) is the die (5) with its calibrated insertion pieces (6): the latter has grooves to guide the blades (7) of the slot-piercing tools (8). The process whereby previously-plasticised polymer castings are converted into tubes using this attachment is described briefly.

19761772

18

AA0043439



21.8.67. as 1181969/23-5, RIMSHA, V.P. and
DOVBYSH, V.G. (3.6.69) Bul. 31/8.10.68. Class 39a⁴
Int. Cl. B 29f.

19761773

USSR

UDC 615.214.22.015.44:576.314

NEMTSOV, A. V., and RIMSKAYA, V. A., Department of Psychopharmacology, Moscow Scientific Research Institute of Psychiatry, Ministry of Health RSFSR

"The Effects of Chlorpromazine, Triflazine, Promazine, and Imipramine on the Properties of Excitable Membranes"

Moscow, Farmakologiya i Toksikologiya, Vol 35, No 2, Mar/Apr 72, pp 145-148

Abstract: Records obtained by means of intracellular microelectrodes indicate that the transmembrane potential of single muscle fibers of the frog sartorius decreases with increasing concentration of potassium ions (from 2.5 to 10 mmol KCl) in the surrounding medium. After preliminary incubation of the muscle in 10^{-4} M solutions of neuroleptics of the phenothiazine series -- chlorpromazine, triflazine, and promazine -- the initial rate of depolarization is decreased, implying a reduced ratio of potassium and chloride conductance of the membrane. The antidepressant imipramine, even though its chemical structure is similar to that of phenothiazines, does not change the rate of depolarization. It is suggested that the K/Cl conductance ratio is reduced because of decreased potassium conductance and that phenothiazine derivatives also inhibit potassium transport during the development of action potentials.

1/1

USSR

UDC 535.853.4:525.7
ARSEN'YAN, T.I., PASHKOV, F.F., SEMENOV, A.A., TISHCHENKO, A.A., RIMSKIY, N.N.
[Moscow State University]

"Interferometric Investigation Of Phase Fluctuations Of Coherent Optical Radiation
In The Atmosphere"

Izv.VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1228-1232

Abstract: The results are presented of an investigation of the phase fluctuations of coherent optical radiation propagating in a randomly inhomogeneous troposphere. The equipment used included an interferometric system based on a Zhukov type interferometer and a special apparatus for quick-response measurement of temperature pulsations. A laser ($\lambda = 0.63$ micron) operating in a regime of axial oscillations was used as the radiation source. The radius of the beam equalled 1.2 cm. An analysis is made of averaged interference patterns as a function of the diversity base of the interfering beams. The interference patterns were obtained under various meteorological conditions which were characterized by various values of the structural constant of the refractive index. It is shown that the difference between the theoretical and experimental dependences $D(\rho)$

1/2

USSR

ARSEN'YAN, T. I., et al., Izv. VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1228-1232

is determined by the turbulence intensity on the trace. A strong dependence is shown of the phase variations on the meteorological conditions along the trace, in particular on the transverse velocity and trace length. 1 fig. 2 tab. 9 ref. Received by editors, 2 Aug 1971.

2/2

- 37 -